



UNITED STATES PATENT AND TRADEMARK OFFICE

cln

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,820	12/31/2003	Michael D. Kotzin	CS22914RA	9362

20280 7590 12/07/2006

MOTOROLA INC
600 NORTH US HIGHWAY 45
ROOM AS437
LIBERTYVILLE, IL 60048-5343

EXAMINER

LE, CANH

ART UNIT	PAPER NUMBER
----------	--------------

2112

DATE MAILED: 12/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary**Application No.**

10/749,820

Applicant(s)

KOTZIN ET AL.

Examiner

Canh Le

Art Unit

2112

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on December 31/2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on December 31/2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2112

DETAILED ACTION

Specification

The use of the trademarks of Sun, Hewlett Packard, Dell, Windows, LINUX, UNIX have been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Please accompany all trademark names with their respective TM symbol.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2, 5, and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Malinen et al. (Publication Number: US 2003/0028763 A1).

Claim 1

Malinen discloses a method of authenticating an electronic device, the electronic device having device specific identifying data stored therein, the method comprising:

obtaining a previously determined challenge response pair associated with the electronic device, the challenge response pair being unique and based upon the device specific identifying data of the electronic device (Paragraph [0083], lines 7-12; Paragraph [0011], lines 1-3); An authentication gateway 155 maintains an authentication session and is able to query the RAND (i.e. challenge) and SRES (i.e. system response) for a received International Mobile Subscriber Identifier (IMSI) from a local authorization database. An identity associated with a client is equivalent to the device specific.

communicating a challenge portion of the challenge response pair to the electronic device (Paragraph [0011], lines 1-5);

receiving from the electronic device a response to the challenge portion the response being based upon the device specific identifying information (Paragraph [0011], lines 5-6); and

comparing the response to a response portion of the challenge response pair to authenticate the user (Paragraph [0011], lines 6-7).

Claim 2

Malinen also discloses the method of claim 1, wherein the step of obtaining a challenge response pair comprises obtaining from a database store of challenge response pairs

Art Unit: 2112

the challenge response pair (Paragraph [0083], lines 7-12). An authentication gateway 155 maintains an authentication session and is able to query the RAND (i.e. challenge) and SRES (i.e. response) for a received International Mobile Subscriber Identifier (IMSI) from a local authorization database.

Claim 5

Malinen also discloses the method of claim 1, wherein the device specific identifying data comprises data stored on a subscriber identity module (SIM) card associated with the electronic device, or computed by the SIM card upon demand (Paragraph [0006], lines 13-14). A key is equivalent to a data.

Claim 7

Malinen also discloses the method of claim 1, wherein the step of obtaining a challenge response pair comprises obtaining via a secure communication interface the challenge response pair (Paragraph [0073], lines 8-10).

Claims 8-12 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Ekberg (International Publication Number: WO 00/02406).

Claim 8

Ekberg discloses a system for device authentication comprising:

an agent for interrogating an electronic device to obtain at least one challenge response pair, the challenge response pair being based upon device specific identifying data retained within the electronic device (Abstract, lines 15-27);

a memory for storing the challenge response pair (Abstract, lines 28-31); and

an agent for providing the challenge response pair from the memory to a user of the challenge response pair for authenticating an electronic device (Abstract, lines 28-31).

Claim 9

Ekberg also discloses the system of claim 8, wherein the device specific identifying data comprises subscribed identity module (SIM) card data from a SIM card within the electronic device (Figure 1, box TE1; Page 15, lines 10-12).

Claim 10

Ekberg also discloses the system of claim 9, wherein the user comprises a service provider having a need to authenticate the electronic device (Figure 1, box TE1; Page 15, lines 10-12).

Claim 11

Ekberg also discloses the system of claim 10, wherein the agent for interrogating and the agent for providing are associated with the service provider (Abstract, lines 15-27).

Claim 12

Ekberg also discloses the system of claim 8, the challenge response pair comprising a challenge portion and a response portion, and wherein the user is operable to communicate the challenge portion to the device and to receive from the device a response based upon the challenge and the device specific identifying data. The system of claim 8 has capability to do all functions in claim 12.

Claim 14

Ekberg discloses a method of providing an authentication service comprising the steps of:

obtaining from an electronic device a plurality of challenge response pairs the challenge response pairs having a challenge portion and a response portion, the response portion being based upon the challenge and device specific identifying data associated with the electronic device (Abstract, lines 15-27);

storing the challenge response pairs (Abstract, lines 28-31); and

providing responsive to a request for an authentication service a challenge response pair to a service provider for authenticating the electronic device (Abstract, lines 28-31).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Malinen et al. (Publication Number: US 2003/0028763 A1) in view of Ekberg (International Publication Number: WO 00/02406).

Claim 3

Malinen discloses the method of authentication an electronic device in claim 1 but does not disclose that the step of obtaining a challenge response pair comprises generating and storing a plurality of challenge response pairs.

Art Unit: 2112

Ekberg discloses to obtain the challenge response pair comprises generating and storing a plurality of challenge response pairs (Abstract, lines 15-18). In order to fetch a challenge response pair in a mobile communication system, it has to generate and store the challenge response pair in this mobile system. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to modify the method of Malinen by including the step of obtaining a challenge response pair comprises generating and storing a plurality of challenge response pairs because it would allow a simple and smooth authentication of users in a geographically large area.

Claim 6

Malinen discloses the method of authentication an electronic device in claim 1 but does not disclose discarding the challenge response pair after use. Ekberg discloses to discard the challenge response pair after use (Col 6, lines 53-65). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to modify the method of Malinen by including the step of discarding the challenge response pair after use because it will prevent anyone from using it again. Thus, it would enhance security.

Claims 13, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ekberg (International Publication Number: WO 00/02406) in view of Blom (Publication Number: 2003/0233546 A1).

Claim 13

Ekberg discloses a system for device authentication in claim 8 but does not disclose the agent for providing the challenge response pair comprises a challenge response pair broker. Blom discloses the agent for providing the challenge response pair comprises a challenge response pair broker (Paragraph [0017]; Paragraph [0024], lines 16-25; Paragraph [0061], lines 11-16). A service provider is equivalent to a broker. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to modify the system of Ekberg by including the agent for providing the challenge response pair that comprises a challenge response pair broker because it would provide an improved system for authentication user at an intermediate party.

Claim 15

Ekberg discloses the method of providing an authentication service in claim 14 but does not disclose the step of obtaining from an electronic device a plurality of challenge response pairs comprises generating from a subscribed identify module (SIM) card a plurality of challenge response pairs and providing the SIM card to a user of the electronic device. Blom discloses the step of obtaining from an electronic device a plurality of challenge response pairs comprises generating from a subscribed identify module (SIM) card a plurality of challenge response pairs and providing the SIM card to a user of the electronic device (Paragraph [0024], lines 16-20). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention was

Art Unit: 2112

made to modify the method of providing authentication service of Ekberg by including the step of obtaining from an electronic device a plurality of challenge response pairs that comprises generating from a subscribed identify module (SIM) card a plurality of challenge response pairs and providing the SIM card to a user of the electronic device because it would provide an improved service for authentication user at an intermediate party.

Claim 16

Ekberg discloses the method of providing an authentication service in claim 14 but does not disclose the step of providing response to a request for an authentication service a challenge response pair that comprises vending the challenge response pair. Blom discloses the step of providing response to a request for an authentication service a challenge response pair comprises vending the challenge response pair (Paragraph [0024], lines 21-25; Paragraph [0061], lines 11-16). A service provider is equivalent to a broker. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to modify the method of providing authentication service of Ekberg by including the step of providing response to a request for an authentication service a challenge response pair that comprises vending the challenge response pair because the above challenge response service enables the intermediate party to prove that the user as been properly authenticated.

Art Unit: 2112

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ekberg (International Publication Number: WO 00/02406) in view of Malinen et al. (Publication Number: US 2003/0028763 A1)

Claim 17

Ekberg discloses the method of providing an authentication service in claim 14 but does not disclose the step of providing response to a request for an authentication service a challenge response pair that comprises securely communicating the challenge response pair to the service provider. Malinen discloses the step of providing response to a request for an authentication service a challenge response pair that comprises securely communicating the challenge response pair to the service provider (Paragraph [0073], lines 8-10). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to modify the method of providing authentication service of Ekberg by including the step of providing response to a request for an authentication service a challenge response pair that comprises securely communicating the challenge response pair to the service provider because it would provide a service to secure a communication between two entities.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Malinen et al. (Publication Number: US 2003/0028763 A1) in view of Blom (Publication Number: US 2003/0233546 A1).

Claim 4

Malinen discloses the method of authentication an electronic device in claim 1 but does not disclose obtaining a challenge response pair that comprises obtaining a challenge response pair from a challenge response pair broker. Blom discloses to obtain the challenge response pair by obtaining a challenge response pair from a challenge response pair broker (Paragraph [0017]; Paragraph [0024], lines 16-25; Paragraph [0061], lines 11-16). A service provider is equivalent to a broker. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to modify the method of Malinen by including step of obtaining the challenge response pair from the challenge response pair broker because it would provide an improved method for authentication for user at an intermediate party.

Conclusion

The prior arts made of record and not relied upon are considered pertinent to applicant's disclosure. The McClain (Pub. No.: 2004/0097217 A1) discloses A system and method for providing authentication and authorization utilizing a personal wireless communication device. The Castrogiovanni et al.(Pub. No.: 2003/0211841 A1) discloses a method, apparatus and article to remotely associate wireless communications devices with subscriber identities and/or proxy wireless communications devices. The Svensson (Pub. No.: 2003/0120920 A1) discloses a remote device authentication. The Swift et al. (Patent No.: 6,377,691 B1) discloses

Art Unit: 2112

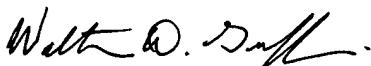
challenge-response authentication and key exchange for a connectionless security protocol.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Canh Le whose telephone number is 571-270-1380. The examiner can normally be reached on Monday to Friday 7:30AM to 5:00PM other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Griffin can be reached on 571-272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Canh Le
November 16, 2006


WALTER D. GRIFFIN
SUPERVISORY PATENT EXAMINER